

Date: Monday, 8/21/2006 2:13:17 PM  
 User: Kimi Johnston

## Process Sheet

<b>Customer</b> : CU-DAR001 Dart Helicopters Services	<b>Drawing Name</b> : STEM
<b>Job Number</b> : 28268A	
<b>Estimate Number</b> : 10399	
<b>P.O. Number</b> : N/A	<b>Part Number</b> : D29683
<b>This Issue</b> : 8/21/2006 <b>S.O. No.</b> : N/A	<b>Drawing Number</b> : D2968
<b>Prsht Rev.</b> : NC	<b>Project Number</b> : N/A
<b>First Issue</b> : N/A <b>Type</b> : MACHINED PARTS	<b>Drawing Revision</b> : B1
<b>Previous Run</b> : 24418A	<b>Material</b> : N/A
<b>Written By</b> : _____	<b>Due Date</b> : 9/8/2006 <b>Qty:</b> 20 <b>Um:</b> Each
<b>Checked &amp; Approved By</b> : _____	
<b>Comment</b> : Est:C 03.04.11 Reformat; Incorporated D2968-1/-5 KJ/RF	

## Additional Product

Job Number:



<b>Seq. #:</b>	<b>Machine Or Operation:</b>	<b>Description :</b>
----------------	------------------------------	----------------------

1.0	M4130NR0750	4130 steel rod .750"
-----	-------------	----------------------



**Comment:** Qty.: 0.3762 f(s)/Unit Total : 7.5243 f(s)  
 Material: AISI 4130 Ø 3/4 " Bar  
 (M4130N-R0.750) Batch: M101998  
 Identify AS D2968-3

J.G 06/09/11 20

2.0	HARDINGE	HARDINGE CNC LATHE SMALL
-----	----------	--------------------------



**Comment:** HARDINGE CNC LATHE SMALL  
 1-Turn Blank as per Folio FA048 and Dwg D2968  
 2-Deburr, no sharp edges

J.G 06/09/11 20

3.0	QC2	INSPECT PARTS AS THEY COME OFF MACHINE
-----	-----	--



**Comment:** INSPECT PARTS AS THEY COME OFF MACHINE

J.G 06/09/12 20

4.0	HAAS1	HAAS CNC VERTICAL MACHINING #1
-----	-------	--------------------------------



**Comment:** HAAS CNC VERTICAL MACHINING #1  
 1- Machine as per Folio FA048 and Dwg D2968  
 2- Deburr

J.F. 06/09/15 20

5.0	QC2	INSPECT PARTS AS THEY COME OFF MACHINE
-----	-----	--



**Comment:** INSPECT PARTS AS THEY COME OFF MACHINE

J.F. 06/09/15 20

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Mfg / Design Mgr	Approval QC Inspector

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Design Mgr	Approval QC Inspector
			Initial Design Mgr	Action Description Design Mgr	Sign & Date			

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes ☒ No ☐ DQA:  Date: 06/09/18

NOTE: Date & initial all entries

QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Date: Monday, 8/21/2006 2:13:17 PM  
User: Kim Johnston

## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: STEM

Job Number: 28268A

Part Number: D29683

Job Number:



Seq. #:

Machine Or Operation:

Description :

6.0

QC8

SECOND CHECK



Comment: SECOND CHECK

06-09-16

20

7.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify and Stock

Location: 51396

06/09/18

20

8.0

DC

DOCUMENT CONTROL



Comment: DOCUMENT CONTROL

Inspection Level 21

06/09/18

20

Job Completion



06/09/18

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Mfg / Design Mgr	Approval QC Inspector

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Design Mgr	Approval QC Inspector
			Initial Design Mgr	Action Description Design Mgr	Sign & Date			

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

NOTE: Date & initial all entries

QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

DART AEROSPACE LTD		Work Order: 28268A
Description: Stem		Part Number: D2968-3
Inspection Dwg: D2968	Rev: B1	Page 1 of 1

### FIRST ARTICLE INSPECTION CHECKLIST

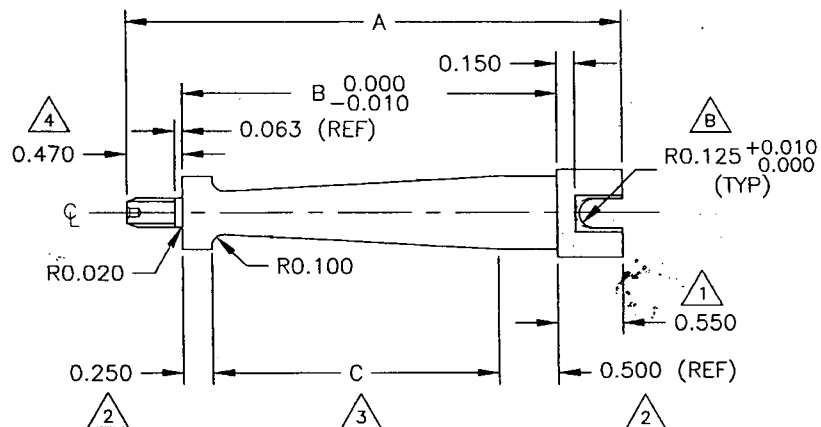
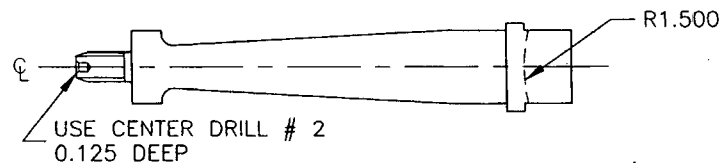
☒ First Article ☐ Prototype

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
4.200	+/-0.010	4.200	✓			
3.180	+/-0.010	3.180	✓			
2.430	+/-0.010	2.430	✓			
0.470	+/-0.010	0.470	✓			
0.250	+/-0.010	0.257	✓			
0.550	+/-0.010	0.555	✓			
Ø0.750	+/-0.010	0.748	✓			
Ø0.625	+/-0.010	0.625	✓			
Ø0.363	+/-0.010	0.366	✓			
0.250	+0.010/-0.000	0.251"	✓			
0.625	+/-0.010	0.627"	✓			
0.150	+/-0.010	0.156"	✓			
1/4-28 UNF	N/A	0.267	✓			
	M.O.W. →					

Measured by: S.G./J.F.	CNC Milling	Audited by: [Signature]	Prototype Approval: N/A
Date: 06/09/12		Date: 06.09.16	Date: N/A

Rev	Date	Change	Revised by	Approved
A	04.02.25	New Issue P/O D2968-043	KJ/RF [Signature]	[Signature]

[Signature]



PART NUMBER	A	B	C
D2968-1	5.040	4.020	3.270
D2968-3	4.200	3.180	2.430

D2968-1/-3 STEM

D2968-1 AND D2968-3 STEM:

MATERIAL: AISI 4130

△ Ø0.750 O.D.

△ Ø0.625 O.D.

△ MACHINE UNIFORM TAPER FROM Ø0.363 O.D. TO Ø0.625 O.D.

△ 1/4-28 UNF THREAD WITH 0.063 GRIP

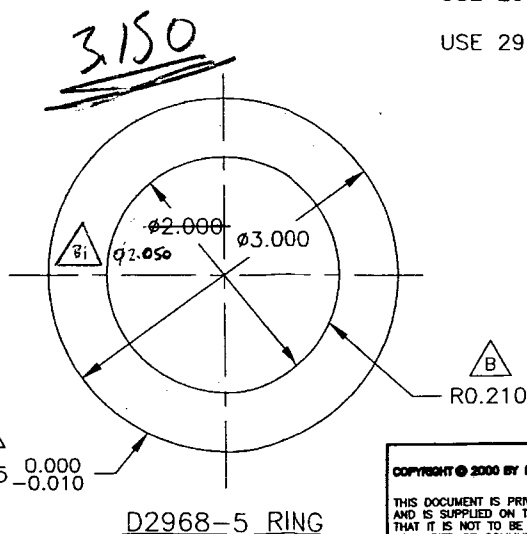
MACHINE ALL INSIDE EDGES WITH A 0.010 RADIUS UNLESS OTHERWISE INDICATED

TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED

D2968-5 RING:

MATERIAL AISI 4130

TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED



D2968-5 RING

D2968-5 RING

1/8

RELEASED

UNDER REVIEW

USE 2968-1 STEM  
FOR -041  
USE 2968-3 STEM  
FOR -043

D2968-041 AND D2968-043 TOW RING:

WELD PER QSI 004 ON ALL EDGES BETWEEN STEM AND RING  
HEAT TREAT TO MIN ULTIMATE TENSILE STRENGTH OF 125 KSI  
FINISH: CAD PLATE ENTIRE ASSEMBLY PER

QQ-P-416F CLASS I TYPE II

POWDER COAT WHITE (REF 4.3.5.2) PER DART

QSI 005 4.3 (EXCEPT THREADS)

TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED

B	00.05.31	R0.125 AND R0.210 WERE 0.060 x 45°
A	00.03.07	NEW ISSUE.
DESIGN	#	DART DART AEROSPACE LTD. WILKESBURY, ONTARIO, CANADA
CHECKED	#	DRAWING NO. D2968
DATE	00.05.31	TITLE TOW RING
APPROVED	#	REV. B SHEET 1 OF 1 SCALE 1:1

COPYRIGHT © 2000 BY DART AEROSPACE LTD.

THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.

NO. 20268A  
WORK ORDER  
20268A  
UNLESS  
AMENDMENT  
WITH NOTICE  
ENGINEERING  
SHOULD COPY  
RETURN TO  
DART AEROSPACE LTD.